

Review of Solomon et al. PeerJ 2019

In this manuscript Solomon et al. describe the results of a series of experiments on the influence of microbes on *D. melanogaster* development. The rationale for conducting this study - as well as the rest of the text - is well written. The methods are sound and the results shed new light on symbiosis and *D. melanogaster*/*D. suzukii* microbiotas.

Put simply, I have very little to say about this work as it is very well conducted and presented. In fact, I rarely had so little to comment about when reviewing a paper. Very good work!

There are a few presentation details that would need revising. It guess this is the first time the MS is presented to referees: there still are a few typos here and there.

The only thing I'd strongly suggest is to reorganize the discussion as in its present form it goes back and forth between different topics, but lacks a clear path. Maybe a few themed subtitles would help

Minor comments and typos:

Line 18: there is a reference to developmental plasticity but it is not present in the text. It is an interesting idea (disclaimer, I currently work on it) that would deserve being properly explained in the text.

Line 90-92: reading the MM was somewhat confusing in the absence of a general , synthetic description of the protocol. Maybe finish the intro with this summary, or insert it at the beginning of the MM.

L111: μ l not ul

L114: chloramphenicol spelling

L137-9: sentence about blasting not very clear.

L146: missing a)

L146-7: how were the inoculated microbes cultured?

L154: can you be more precise as to when the microbes were counted.

L160 & 170: please indicate nature and origin of the larvae (ie axenic?)

L203: Acetobact spelling

L376-77: I disagree with this sentence. That different yeasts accelerate larval development in rich medium does not mean there is a single underlying mechanism. Indeed, speed of growth summarizes many developmental processes. I'm sure the

authors would agree that it is possible to make a fat human by many different means (eg more hamburgers, less sport, insulin signaling, metabolism...).

Figure 7 legend: "OSW_450_qq (C-D), washed, " should read (B-D) I reckon

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